IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

FINALROD IP, LLC, *Plaintiff,* v. ENDURANCE LIFT SOLUTIONS, INC., *Defendant.*	§ § § § § § § § § § § §	Case No. 2:20-cv-00189-JRG-RSP

CLAIM CONSTRUCTION MEMORANDUM AND ORDER

On April 22, 2021, the Court held a hearing to determine the proper construction of the disputed claim terms within in U.S. Patent No. 10,385,625 ("'625 Patent"). Having reviewed the arguments made by the parties at the hearing and in their claim construction briefing (Dkt. Nos. 49, 50, 51), having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Memorandum and Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc); *see also Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

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I. PROCEDURAL BACKGROUND

Plaintiff Finalrod IP, LLC alleges that Defendant Endurance Lift Solutions, Inc. infringes Independent Claim 13 and Dependent Claims 14 and 15 of the '625 Patent. Shortly before the start of the April 22, 2021 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties' arguments and facilitating discussion.

The application resulting in the '625 Patent was filed on November 9, 2015. The '625 Patent derives from an application that is a continuation-in-part of the application resulting in U.S. Patent No. 9,181,757 ("'757 Patent), titled "Sucker Rod Apparatus and Method," which issued on November 10, 2015. The '757 Patent was a continuation-in-part of the application resulting in U.S. Patent No. 8,851,162 ("'162 Patent"), titled "Sucker Rod Apparatus and Method," which issued on October 7, 2014.

Plaintiff had already commenced patent litigation against Defendant's predecessor in the Western District of Texas (Case No. 7:15-cv-00097) (the "*Finalrod I* Litigation") when the application for the '625 Patent was filed. Dkt. No. 50-11. Defendant was subsequently named as a defendant in the *Finalrod I* Litigation. In the *Finalrod I* Litigation, Plaintiff alleged that the S300 infringed the '757 Patent. *Id.* The *Finalrod I* court generally adopted the claim construction recommended by the Special Master in that case. Dkt. No. 49-7. Plaintiff subsequently stipulated to a final judgment of non-infringement, which the *Finalrod I* court entered on April 24, 2020. Dkt. No. 50-16. Plaintiff appealed the judgment to the Federal Circuit, but did not dispute any of the *Finalrod I* Litigation's claim construction rulings. The Federal Circuit heard the appeal, and on March 1, 2021, affirmed the judgment in relevant part. Dkt. No. 50-17.

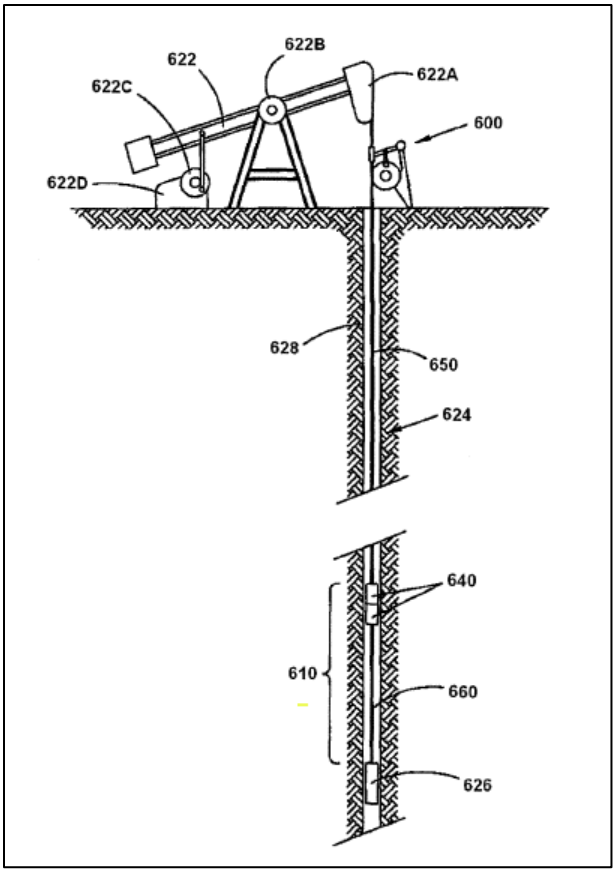
I. BACKGROUND OF THE ASSERTED PATENT

The '625 Patent generally relates to sucker rods used in sub-surface pumping in oil wells.

The specification provides the following general background regarding the use of sucker rods:

> When production from a hydrocarbon well attainable through natural means (e.g., pressure within the wellbore) is no longer sufficient for the well to remain economically viable, numerous types of secondary recovery methods exist to increase the productivity of the well. One such method includes use of a downhole pump that is inserted into the wellbore, then actuated to draw hydrocarbons and/or other fluids toward the surface. Conventionally, downhole pumps are actuated by physically manipulating values and/or other operable parts from the surface, through movement of a pump jack or similar powered device, that is connected to the downhole pump using a long string of joined connectors, termed "sucker rods."
>
> Conventional sucker rod strings are formed from lengths of steel rod, having threaded connectors at each end for engaging adjacent segments of rod, to form a string of sufficient length to connect a pump jack to a down hole pump. Because steel is heavy, expensive, and suffers from other inherent difficulties, alternative types of sucker rod materials have been explored, such as fiberglass. Fiberglass offers an equivalent or greater tensile strength than steel, while being both lighter and less costly, enabling a string of fiberglass sucker rods to be reciprocated using less energy and smaller equipment. Fiberglass rods also possess the ability to stretch in an axial direction, such that each stroke of a pump jack can be assisted by the natural expansion and contraction of the sucker rod string, allowing for shorter and more energy efficient strokes.
>
> The ends of fiberglass rod segments used in a sucker rod string can be connected by use of threaded end connectors or end fittings, typically made from steel. An epoxy or other suitable resin can be introduced into the end fitting for bonding to and between the exterior of the fiberglass rod segment and interior of the end fitting. By providing epoxy or other resin into the interior of an end fitting, the epoxy or other resin when cured bonds to the fiberglass rod segment, while filling the interior cavity of the end fitting. The cured epoxy or other resin ("resin material") prevents removal or displacement of the rod from the end fitting during use.

'625 Patent at 1:24–62. Figure 13 of the '625 Patent illustrates a generic pumping system 600 that is connected to downhole pump 626 via sucker rods 650.



The Abstract of the ’625 Patent states the following:

> Sucker rods include end fittings having an outer wedge portion proximate to an open end, an inner wedge portion proximate to a closed end, and an intermediate wedge portion between the outer and inner wedges. Each wedge includes a leading edge, a trailing edge, and an angle between the leading and trailing edges. The triangular configuration, length of the leading edge, the length of the trailing edge, and size of the angle in each wedge portion cause distribution of force, such that compressive forces distributed to the rod proximate the closed end exceed compressive forces distributed to the rod proximate the open end.

Figure 1 illustrates wedge system 13 having an outer wedge 20, an intermediate wedge 22, and an inner wedge 24. *Id.* at 7:25–27.

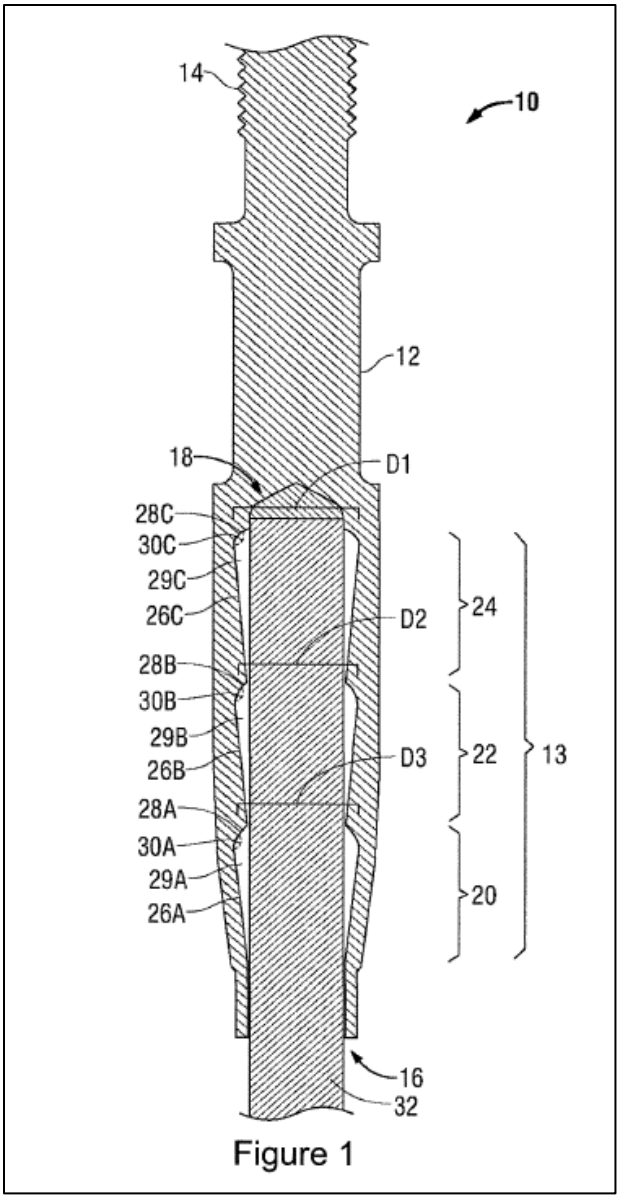


Figure 1

Id. at Figure 1. The specification further states that suitable securing material, such as a suitable cured epoxy or other resin, is present in the cavity between sucker rod segment 32 and the interior surface of end fitting 10, and fixedly secures the sucker rod segment 32 in end fitting 10. *Id.* at 7:27–32.

Claim 13 of the ’625 Patent is an illustrative claim and recites the following elements (disputed terms in italics):

13. An end fitting for a sucker rod comprising:

a body comprising a cavity for receiving an epoxy, the cavity comprising an interior surface, a closed end, and an open end, wherein the interior surface of said cavity comprises a plurality of leading edges, a plurality of *trailing edges*, and a plurality of vertices there between, wherein each of the plurality of leading edges diverge away from the sucker rod from the open end to the closed end, wherein each of the plurality of *trailing edges* converge towards the sucker rod from the open end to the closed end,

wherein a respective length of the respective plurality of leading edges decreases from the open end to the closed end, and wherein a respective length of the respective plurality of *trailing edges* increases from the open end to the closed end.

II. APPLICABLE LAW

A. Claim Construction

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Grp., Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (quotation marks omitted)

("There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.") *cert. granted, judgment vacated,* 135 S. Ct. 1846 (2015).

"The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). "[I]n all aspects of claim construction, 'the name of the game is the claim.'" *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)) *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). First, a term's context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim's meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314–15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id*. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id*.

The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. But, "'[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. "[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office ("PTO") and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* at 1318; *see also Athletic Alts., Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be "unhelpful as an interpretive resource").

Although extrinsic evidence can also be useful, it is "'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might

use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are not helpful to a court. *Id*. Extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*. The Supreme Court has explained the role of extrinsic evidence in claim construction:

> In some cases, however, the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. *See, e.g., Seymour v. Osborne*, 11 Wall. 516, 546 (1871) (a patent may be "so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning"). In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the "evidentiary underpinnings" of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 331–32 (2015).

B. Departing from the Ordinary Meaning of a Claim Term

There are "only two exceptions to [the] general rule" that claim terms are construed according to their plain and ordinary meaning: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution."[1] *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) ("[T]he specification and prosecution history only compel departure from the

[1] Some cases have characterized other principles of claim construction as "exceptions" to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

plain meaning in two instances: lexicography and disavowal."). The standards for finding lexicography or disavowal are "exacting." *GE Lighting Sols.*, 750 F.3d at 1309.

To act as his own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term," and "clearly express an intent to define the term." *Id.* (quoting *Thorner*, 669 F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee's lexicography must appear "with reasonable clarity, deliberateness, and precision." *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee's statements in the specification or prosecution history must amount to a "clear and unmistakable" surrender. *Cordis Corp. v. Bos. Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 ("The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope."). "Where an applicant's statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

C. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 911. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.,* 875 F.3d 1360, 1365 (Fed. Cir. 2017). "[I]ndefiniteness is a question of law and in

effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, "the court must determine whether the patent provides some standard for measuring that degree." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, "a court must determine whether the patent's specification supplies some standard for measuring the scope of the [term]." *Ernie Ball, Inc. v. Earvana, LLC*, 502 F. App'x 971, 980 (Fed. Cir. 2013) (citations omitted). The standard "must provide objective boundaries for those of skill in the art." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014).

III. CONSTRUCTION OF THE DISPUTED TERMS

The parties dispute the meaning of two terms/phrases.

A. "trailing edge"

Disputed Term	Plaintiff's Proposal	Defendant's Proposal
"trailing edge"	"edge(s) of the wedge shaped portion extending from the vertex to the narrowest part of the cavity of the respective wedge portion"	"edge(s) of the wedge shaped portion extending from and between the apogee and the perigee, ending in a clear transition point at the apogee"

1. The Parties' Positions

The parties dispute whether the term "trailing edge" should be construed to mean "edge(s) of the wedge shaped portion extending from the vertex to the narrowest part of the cavity of the respective wedge portion," as Plaintiff proposes, or construed to mean "edge(s) of the wedge shaped portion extending from and between the apogee and the perigee, ending in a clear transition point at the apogee," as Defendant proposes. Plaintiff argues that its construction is supported by

the claims and the specification of the '625 Patent. Dkt. No. 49 at 17-18.[2] Plaintiff contends that the specification demonstrates that the trailing edges are bound on the other end by the narrowest portion of each cavity of the wedge portions. *Id.* at 18 (citing '625 Patent, Figs. 1, 12).

Plaintiff also argues that the Court should not adopt Defendant's construction because the terms "apogee" and "perigee" are absent from the claims, specification, and prosecution history of the '625 Patent. *Id.* at 19-20. Plaintiff contends that importing words into the claims that do not appear in the specification only serves to create uncertainty as to the scope of the asserted claims. *Id.* at 20. Plaintiff also argues that the Court should not adopt Defendant's construction because it would exclude the majority of embodiments disclosed and described in the '625 Patent. *Id.* at 21. According to Plaintiff, the embodiment depicted in Figure 12 "features gradual transitions between the diverge and convergence, which define wedge portions (820, 822, 824) having arcuate vertices (829A-C) and arcuate transition surfaces (830A-C)." *Id.* (citing '625 Patent at 26:24–27).

Plaintiff also contends that Defendant's construction attempts to interpret "transition point" as an intersection of straight lines. *Id.* at 22. Plaintiff argues that this interpretation contradicts the specification. *Id.* According to Plaintiff, adopting a construction requiring a "clear transition point" in the context of an intersection only serves to create ambiguity in the claim scope because of the specification's description of "point." *Id.* (citing '625 Patent at 2:14–15).

Defendant responds by asking the Court to provide the same construction of "trailing edge(s)" as was entered in the *Finalrod I* Litigation for the '757 Patent. Dkt. No. 50 at 11-13. Defendant argues that Plaintiff fails to provide any argument to overcome the presumption that "trailing edge" is to be interpreted the same way in the '625 and '757 Patents. *Id.* at 13. Defendant further argues that its construction requires the trailing edge to end in a "clear transition point" at

[2] Citations to the parties' filings are to the filing's number in the docket (Dkt. No.) and pin cites are to the page numbers assigned through ECF.

the apogee. *Id.* at 14. Defendant contends that the court in the *Finalrod I* Litigation determined that the patentee expressly disclaimed wedges that do not end in a clear transition point at the apogee. *Id.* at 14-16. Defendant argues that the prosecution histories of "other patents from the same family … inform [the Court's] construction of the claims." *Id.* at 16 (citing *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1314 (Fed. Cir. 2007)).

Defendant also argues that the Federal Circuit has made it clear that every claim need not be construed to encompass each of the multiple embodiments disclosed in a specification. *Id.* at 17-18) (citing *Sinorgchem Co., Shandong v. Int'l Trade Com'n*, 511 F.3d 1132, 1138 (Fed. Cir. 2007)). According to Defendant, the prosecution history of the '625 Patent establishes that the asserted claims are not intended to cover all embodiments. *Id.* at 18-19. Defendant further argues that there is no difference between the term "vertex" and the term "perigee," as well as the phrase "narrowest part of the cavity" and the term "apogee." *Id.* at 19. According to Defendant, the specification for the '757 Patent expressly equated the terms "narrowest part of the cavity" and "apogee." *Id.* (citing '757 Patent at 3:22–26). Defendant argues that there is no legitimate reason to change terminology given the presumption in favor of existing claim constructions. *Id.* (citing *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003); *Fin Control Systems Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001)).

Plaintiff replies that Defendant does not hide the fact that it is attempting to construe the "trailing edge" limitation to exclude embodiments depicted in any figures other than Figure 2A of the '162 Patent. Dkt. No. 51 at 2. Plaintiff also argues that Defendant proposes using language that does not exist in the '625 Patent, specifically the terms "apogee" and "perigee". *Id.* at 3. Plaintiff contends that Defendant's construction will not provide any further guidance as to the scope of the asserted claims. *Id.* Plaintiff further argues that the '625 Patent uses the term "trailing edge" to

describe different embodiments than the one shown in Figure 2 of the '162 and '757 Patents. *Id.* at 4. According to Plaintiff, Defendant's construction would contradict the plain language of the claims and specification. *Id.*

2. Analysis

The term "trailing edge" appears in asserted Claim 13 of the '625 Patent. Claim 13 recites a body comprising a cavity with an interior surface. The claim further recites that the interior surface of the cavity includes a plurality of leading edges, a plurality of trailing edges, and a plurality of vertices between each leading edge and each trialing edge. Unlike the other independent claims in the '625 Patent, Claim 13 does not recite that the plurality of leading edges, the plurality of trailing edges, and the plurality of vertices define a respective plurality of wedge portions. *See, e.g.*, '625 Patent at 28:31–33 ("wherein the plurality of leading edges, the plurality of trailing edges, and the plurality of vertices define a respective plurality of wedge portions."). However, the parties agree, as indicated by their respective proposed constructions, that the trailing edge is an edge of a wedge shaped portion. Likewise, the Court agrees that this would be the understanding of a person of ordinary skill in the art.

Claim 13 further recites that the trailing edges converge toward the sucker rod from the open end to the closed end. Thus, the claim provides an orientation or direction of the trailing edge with respect to the recited vertex and cavity. Specifically, the "trailing edge" is the "edge of a wedge shaped portion that extends from the vertex of the wedge shaped portion to the narrowest part of the cavity of the respective wedge portion." This is confirmed by the specification, which states that "[o]uter leading edge (526A) intersects outer trailing edge (528A) at a respective outer vertex (529A). . . [i]ntermediate leading edge (526B) intersects intermediate trailing edge (528B) at a respective intermediate vertex (529B), [and] . . . [i]nner leading edge (526C) intersects inner

trailing edge (528C) at a respective inner vertex (529C).” ’625 Patent at 23:39–40, 58–60, 24:7–9. The specification further indicates that the trailing edges are bound on the other end by the narrowest portion of each cavity of the wedge portions. Annotated Figure 12 illustrates the trailing edges 828A, 828B, and 828C (red), and vertices 829A, 829B, and 829C (blue). The annotated figure also shows each trailing edge extending from the vertex to the narrowest part of the cavity of each respective wedge portion (green).

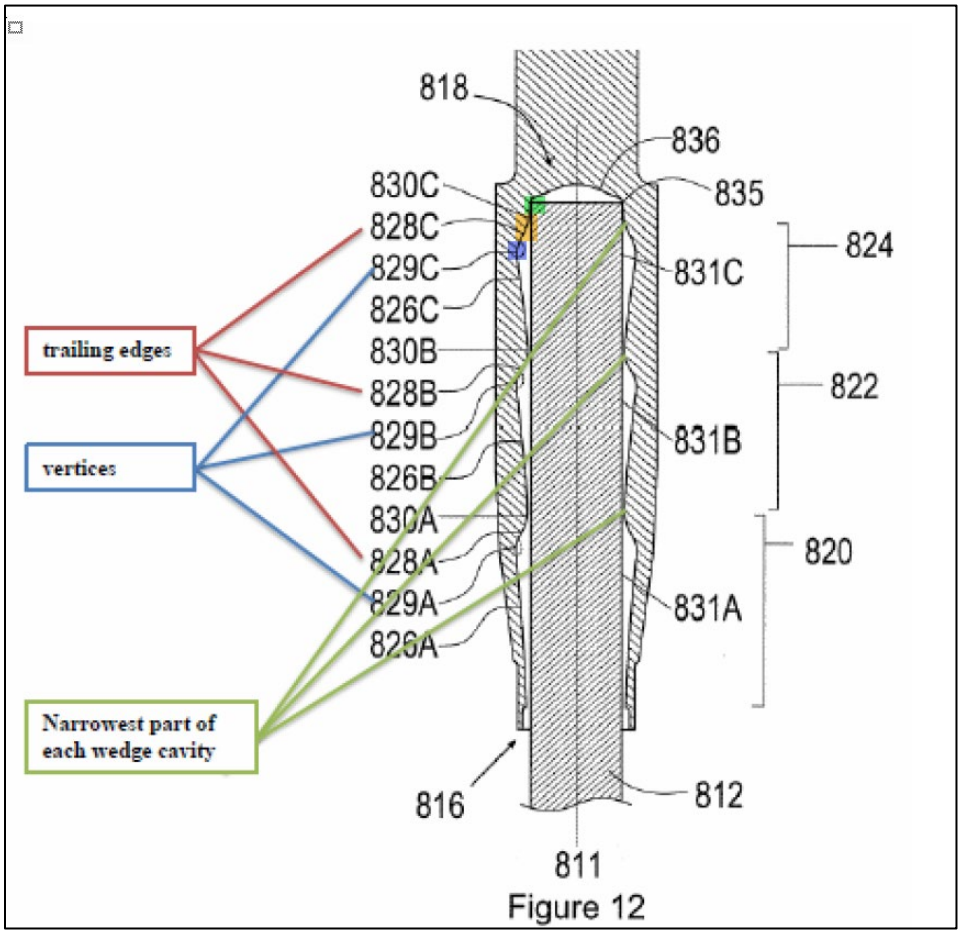


Figure 12

Id., Fig. 12 (annotated). Figures 1-11 also show each trailing edge extending from the vertex to the narrowest part of the cavity of each respective wedge portion (green). Accordingly, a person of ordinary skill in the art would understand the recited “trailing edge” is the “edge of a wedge shaped portion that extends from the vertex of the wedge shaped portion to the narrowest part of the cavity

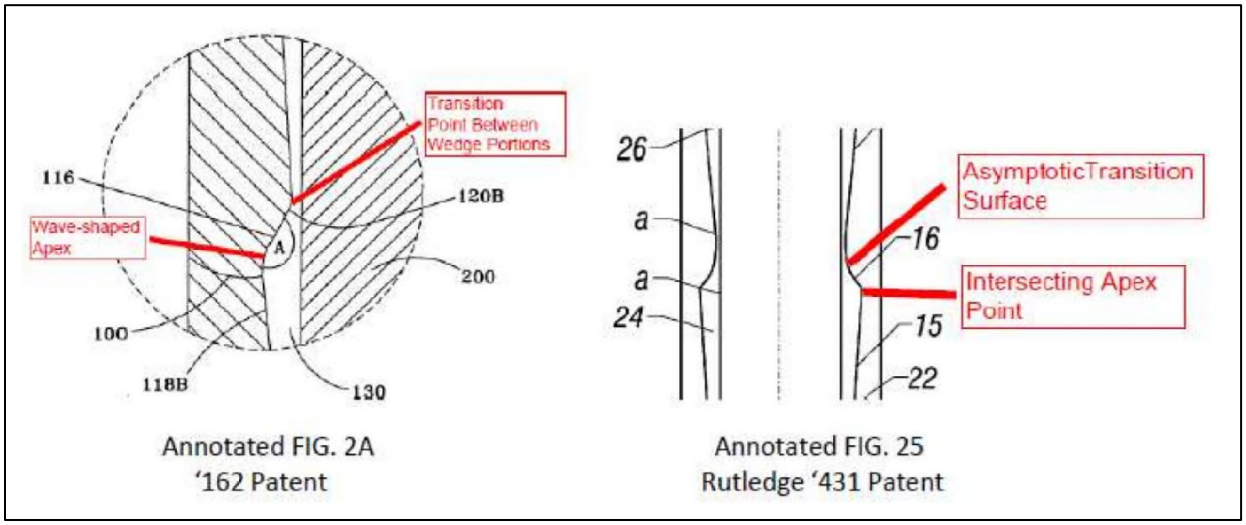
of the respective wedge portion."

Defendant argues that the Court should adopt the same construction of "trailing edge" as was entered in the *Finalrod I* Litigation for the '757 Patent. Defendant contends that the term "trailing edge" is used similarly in the '625 and '757 Patents. Defendant further argues that the Court is to "presume, unless otherwise compelled, that the same claim term in … related patents carries the same construed meaning." Dkt. No. 50 at 12-13 (citing *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003)).

Defendant also argues that Plaintiff had expressly disclaimed wedges that do not end in a clear transition point at the apogee. *Id.* at 14. As discussed above, the '625 Patent is a continuation-in-part of the '757 Patent, which itself is a continuation-in-part of the '162 Patent. On January 29, 2016, John Crane Production Solutions Inc. ("JCPS") challenged the validity of the '162 Patent by filing an IPR petition with the USPTO's Patent Trial and Appeal Board ("PTAB"). JCPS argued that the '162 Patent was invalid based on prior art U.S. Patent No. 6,196,431 ("'431 Patent"). Dkt. No. 50-3 at 25 to 50-4 at 18. Specifically, JCPS argued that the '431 Patent describes wedges that approach the rod "asymptotically" (*i.e.*, "that an extrapolation of the edge will not intersect with the rod"). *Id.*

Defendant contends that Plaintiff distinguished the '431 Patent by arguing that, unlike the '431 Patent, the '162 Patent: (1) "describes and depicts a clear transition point between the wedge portion," and (2) "does not disclose, teach, suggest, or otherwise contemplate the use of asymptotic curves as transition surfaces between each wedge portion." Dkt. No. 50-5 at 31, 33. Defendant further contends that Plaintiff further argued that an end-fitting where the wedges lacked a clear transition surface was the "structural antithesis of the subject matter claimed in the '162 Patent." *Id.* Defendant states that Plaintiff presented the following graphic to support its argument that the

’162 Patent was the “opposite configuration” from the prior art where the transition occurred at an asymptotic curve.

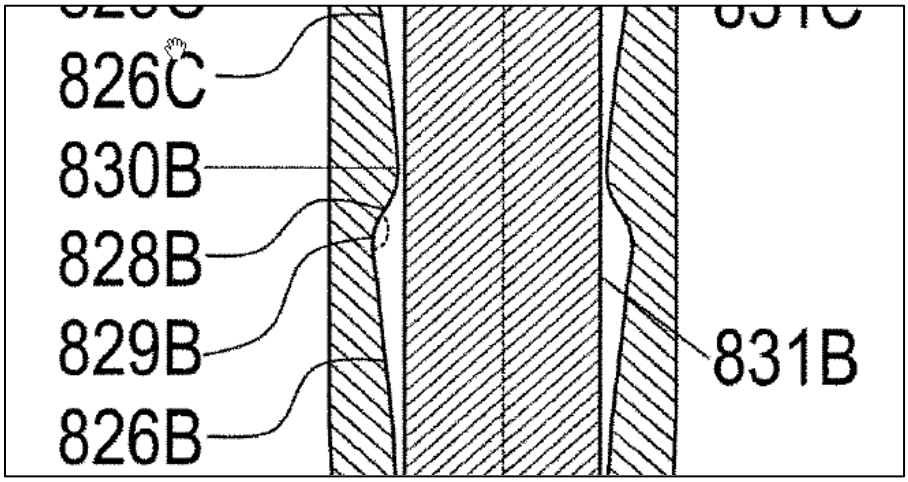


Dkt. No. 50-5 at 33. According to Defendant, the prosecution histories of “other patents from the same family … inform [the Court’s] construction of the claims.” Dkt. No. 50 at 16 (citing *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1314 (Fed. Cir. 2007)). Defendant also contends that “an interpretation asserted in the prosecution of a parent application can also affect continuation applications[,] … continuation-in-part applications … [and] even related continuation-in-part applications arising from the same parent.” *Id.* (citing *Ormco*, 498 F.3d at 1333-34).

The Court disagrees that it should adopt the same construction of “trailing edge(s)” as was entered in the *Finalrod I* Litigation for at least two reasons. First, the terms “apogee” and “perigee” are not defined or supported by the claims, specification, or the prosecution history of the ’625 Patent. In fact, the terms “apogee” and “perigee” do not appear in the specification of the ’625 Patent, and are not used to describe the “trialing edge.” Although, the ’625 Patent is a continuation-in-part of the ’162 Patent at issue in the IPR, the specifications of the ’625 Patent and the ’162 Patent have almost no overlap. In contrast, the specification of the ’162 Patent and the ’757 Patent have substantial overlap, and the ’757 Patent specifically used the terms “apogee” and “perigee”

to describe the trailing edge. Accordingly, the Court is not persuaded that it should import words into the claims that do not appear in the specification of the '625 Patent, because it would create uncertainty as to the scope of the asserted claims.

Moreover, Defendant's construction would exclude a disclosed embodiment. "A claim construction that excludes an embodiment disclosed by the specification 'is rarely, if ever, correct.'" *Mars, Inc. v. TruRX LLC*, 2015 U.S. Dist. LEXIS 187875, at *16-17 (E.D. Tex. Aug. 6, 2015) (citing *SanDisk v. Memorex Products, Inc.*, 415 F.3d 1278, 1285 (Fed. Cir. 2005). "Thus, 'where claims can reasonably [be] interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment.'" *Id.* (citing *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1276-77 (Fed. Cir. 2008)). Here, the embodiment illustrated in Figure 12 "features gradual transitions between the diverge and convergence, which define wedge portions (820, 822, 824) having arcuate vertices (829A-C) and arcuate transition surfaces (830A-C)" '625 Patent at 26:24–27. A partial view of Figure 12 follows:



'625 Patent, Fig. 12 (partial view). As illustrated, the embodiment depicted in Figure 12 has trailing edges which terminate at some portion or area along a curve. Defendant's construction attempts to interpret "transition point" as an intersection of straight lines, which would exclude this embodiment.

Defendant responds that the prosecution history of the '625 Patent establishes that the asserted claims are not intended to cover all embodiments, and certainly not the embodiment of Figure 12. Dkt. No. 50 at 18. Defendant argues that during prosecution the patentees added a set of "new" claims (then labeled 19, 21, and 22), which ultimately became the asserted claims 13-15. *Id.* (citing Dkt. No. 50-10 at 6-7). Regarding these claims, the patentees argued the following:

> The Office rejects claim 10 as being anticipated by Rutledge 2008/0219757. Applicants have cancelled this claim and submit new claims, 19-22, describing an inverted relationship between the lengths of the leading edge and the lengths of the trailing edges from the closed to open end of the end fitting. It is believed that these claims are distinct from the cited prior art and supported *at least by* paragraph [86] of the specification and FIG 9 of the drawings.

Dkt. No. 50-10 at 9 (emphasis added). Defendant argues that the patentees disclaimed all embodiments, except the ones described in Figure 9. The Court disagrees. "To constitute disclaimer, there must be a clear and unmistakable disclaimer." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366-1367 (Fed. Cir. February 1, 2012). Here, the cited portion of the prosecution states that the claims are supported "at least by" paragraph 86 and Figure 9. This is not a clear and unmistakable disclaimer because it identifies Figure 9 as one example (*i.e.*, "at least by"), and by no means excludes all other figures or possible embodiments. Accordingly, the Court rejects Defendant's construction.

3. Court's Construction

For the reasons set forth above, the Court construes the term **"trailing edge"** to mean **"edge of a wedge shaped portion that extends from the vertex of the wedge shaped portion to the narrowest part of the cavity of the respective wedge portion."**

B. "wherein the compressive force of the end fitting under load is greater proximate to the closed end than proximate to the open end"

Disputed Term	Plaintiff's Proposal	Defendant's Proposal
"wherein the compressive force of the end fitting under load is greater proximate to the closed end than proximate to the open end"	No construction necessary. Plain and ordinary meaning as understood by one of ordinary skill in the art. *Alternatively*, the compressive forces that act upon the wedge system when a load is applied are greater near the closed end as compared to the open end of the end fitting.	Indefinite

1. The Parties' Positions

The parties dispute whether the phrase "wherein the compressive force of the end fitting under load is greater proximate to the closed end than proximate to the open end" is indefinite. Plaintiff first argues that Defendant should be judicially estopped from asserting indefiniteness for this phrase. Dkt. No. 49 at 5. Plaintiff contends that Defendant's indefinite position is inconsistent with its previous position on the "compressive forces" limitation with respect to the '757 Patent in the *Finalrod I* Litigation. *Id.* at 6-8. According to Plaintiff, Defendant maintained the position that the "compressive forces" limitation was definite and amenable to construction. *Id.* at 8. Plaintiff further argues that Defendant was successful in persuading the Court to construe the "compressive forces" limitation as definite. *Id.* Plaintiff also argues that Defendant's new position imposes an unfair detriment to Plaintiff. *Id.* According to Plaintiff, these factor weigh heavily in favor of estoppel. *Id.* at 9.

Plaintiff next contends that the "compressive force" limitation is not indefinite. *Id.* at 10. Plaintiff argues that "the Federal Circuit has made clear that a patent is not indefinite merely because it fails to specify which method of measurement should be used, or because different methods may produce different results." *Id.* at 10-11 (citing *Purdue Pharm. Prods., L.P. v. Actavis*

Elizabeth, LLC, Civil Action No. 12-5311 (JLL), 2014 U.S. Dist. LEXIS 80920, at *16 (D.N.J. June 11, 2014)). Plaintiff argues that Defendant is attempting to hold it to a higher standard than set forth by the Federal Circuit and require disclosure of each and every potential method of measuring/testing the compressive force on the end fittings. *Id.* at 11. According to Plaintiff, a person of ordinary skill in the art would also be able to review the patent, specification, and file history and understand that the claimed invention does not require specific values for the compressive force. *Id.*

Plaintiff also argues that disclosing the method in which the compressive force is being measured is not required. *Id.* at 12 (citing *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312 (Fed. Cir. 2015)). Plaintiff contends that the specification sufficiently describes and claims the compressive forces in such a way that a person of ordinary skill in the art would understand which forces are relevant and how those forces can be measured. *Id.* at 13. Plaintiff also contends that Defendant authored a paper that confirms that it understands "compressive forces" and compression loading when it comes to their own technology. *Id.* at 13-14 (citing Dkt. No. 49-15).

Regarding the proper construction for the disputed phrase, Plaintiff argues the phrase does not require construction, and should be given its plain and ordinary meaning. *Id.* at 23. According to Plaintiff, a technical term used in a patent document is interpreted as having the meaning that it would be given by persons experienced in the field of the invention. *Id.* Plaintiff also contends that the extrinsic evidence further supports the plain and ordinary meaning of the "compressive forces" limitation. *Id.*

In the alternative, Plaintiff argues that the compressive force limitation should be defined as "the compressive forces that act upon the wedge system when a load is applied are greater near the closed end as compared to the open end of the end fitting." *Id.* at 23. Plaintiff contends that

this construction is supported by the specification. *Id.* (citing '625 Patent at 4:3–11). Plaintiff argues that the Court should determine that no construction is necessary, or in the alternative, interpret the "compressive forces" limitation as it proposes. *Id.* at 24.

Defendant responds Plaintiff does not identify any statement where Defendant said the "compressive forces" limitation or term "compressive forces" was definite in the *Finalrod I* Litigation. Dkt. No. 50 at 21. Defendant also argues that Plaintiff does not identify the meaning of the "compressive forces" limitation that Defendant led the *Finalrod I* court to adopt. *Id.* Defendant further argues that the "compressive forces" limitation was not among the terms that were construed in the *Finalrod I* Litigation. *Id.* at 22-23. Defendant argues that there is no basis for the Court to apply judicial estoppel. *Id.* at 24.

Regarding its indefinite contention, Defendant argues that there are multiple types of compressive forces that act upon an end fitting. *Id.* Defendant contends that sucker rod end fittings are subjected to compressive forces in axial, radial, and circumferential directions. *Id.* Defendant argues that to know whether an end fitting practices Claim 15, it is necessary to measure and compare the "compressive forces" under load between wedge portions of the end fitting. *Id.* at 25. Defendant further argues that the intrinsic evidence does not provide guidance on how to identify the relevant "compressive forces" or how to measure them. *Id.*

According to Defendant, there are different approaches to measure relative compressive forces at various parts of an end fitting, and the intrinsic evidence provides no guidance on which approach is to be used. *Id.* at 26-28. Defendant argues that the compressive force limitation is indefinite because: (i) it fails to teach any particular method for measuring and comparing "compressive forces" between wedges of an end fitting, and (ii) different forces and different methodologies for measuring those forces exist in the art and would lead to different outcome-

determinative results. *Id.* at 30-32.

Plaintiff replies that all three factors weigh in favor of the Court finding that Defendant is judicially estopped from asserting that the "compressive forces" limitation is indefinite. Dkt. No. 51 at 4-7. Regarding the indefinite issue, Plaintiff contends that although there may be different methods of measuring the compressive force on the end fitting, it is far from clear whether these differences are "outcome-determinative" when both methods result in greater compressive force at the closed end of the end fitting and decreasing toward the open end. *Id.* at 9. Plaintiff argues that the existence of multiple potential methods of measuring/testing compressive force on the end fitting does not render the claims limitation indefinite. *Id.* Plaintiff also argues that both Defendant and its expert understood that the "compressive force" limitation was not indefinite in *Finalrod I*. *Id.* at 9-10.

2. Analysis

As an initial matter, the Court is not persuaded that it should use its discretion to find that Defendant is judicially estopped from asserting indefiniteness for this disputed phrase. Plaintiff argues that Defendant is judicially estopped from asserting indefiniteness for this phrase due to its prior position of definiteness of same term in a related patent. Dkt. No. 49 at 5-9. Defendant responds that judicial estoppel "is 'an equitable doctrine invoked by a court at its discretion' to 'protect the integrity of the judicial process.'" *Reed v. City of Arlington*, 650 F.3d 571, 574 (5th Cir. 2011) (citing *New Hampshire v. Maine*, 532 U.S. 742, 749-50 (2001)). The Court finds Plaintiff's argument unpersuasive. The disputed phrase, as well as the term "compressive force" itself, was not construed in the *Finalrod I* Litigation. Instead, the disputed phrase was "a force differential along the wedge system." Dependent Claim 15 does not recite the words "force differential" or "wedge system."

Regarding the indefiniteness argument, "[t]he Patent Act requires that a patent specification 'conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as [the] invention.'" *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014) (quoting 35 U.S.C. § 112, ¶ 2). Because a patent is presumed valid, "[t]he party challenging the patent bears the burden of proving invalidity by clear and convincing evidence." *Takeda Pharms. Co. v. Zydus Pharms. USA, Inc.*, 743 F.3d 1359, 1366 (Fed.Cir.2014). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus*, 572 U.S. at 901. For the following reasons, the Court finds that the disputed phrase is not indefinite.

The disputed phrase "wherein the compressive force of the end fitting under load is greater proximate to the closed end than proximate to the open end" appears in Dependent Claim 15 of the '625 Patent. Independent Claim 13, from which Claim 15 depends, recites that the "end fitting for a sucker rod" includes a "closed end" and an "open end." Dependent Claim 15 further recites that "the compressive force of the end fitting under load is greater proximate to the closed end than proximate to the open end." As discussed with the previous term, Independent Claim 13 does not state that the recited plurality of leading edges, plurality of trailing edges, and plurality of vertices define a respective plurality of wedge portions. However, as indicated in their proposed constructions for the term "trailing edge," the parties agrees that the recited edges and vertices define a plurality of wedge shaped portions. The wedge shaped portions determine the compressive forces applied to the sucker rod. Indeed, Defendant conceded at the claim construction hearing that the recited compressive forces are distributed to the sucker rod via the wedge shaped portions, and that the claims relate only to compressive forces exerted on the sucker

rod.

Consistent with this understanding, the specification states that the wedge shaped portions of the end fitting distribute the compressive force to the sucker rod. For example, the abstract states that "[t]he triangular configuration, length of the leading edge, the length of the trailing edge, and size of the angle in each wedge portion cause distribution of force, such that compressive forces distributed to the rod proximate the closed end exceed compressive forces distributed to the rod proximate the open end." '625 Patent at Abstract; s*ee also*, *id.* at 3:22–34 ("compressive forces distributed to the rod segment"), 7:63–8:7 ("will distribute compressive force to the sucker rod segment"). Accordingly, a person of ordinary skill in the art would understand that the phrase "the compressive force of the end fitting under load" means "the compressive force distributed to the sucker rod through the end fitting."

The remaining portion of the disputed phrase does not require construction, because it further qualifies that "the compressive force distributed to the sucker rod through the end fitting" is "greater proximate to the closed end than proximate to the open end." As discussed above, the claim language identifies the location of closed end and open end, and a person of ordinary skill in the art could determine whether the compressive force is greater in one location than another.

Defendant argues that the compressive force limitation is indefinite because: (i) it fails to teach any particular method for measuring and comparing "compressive forces" between wedges of an end fitting, and (ii) different forces and different methodologies for measuring those forces exist in the art and would lead to different outcome-determinative results. Dkt. No. 50 at 30-32. Defendant principally relies on two Federal Circuit opinions in support of their indefiniteness arguments: (1) *Dow Chemical Co. v. Nova Chemicals Corp.*, 803 F.3d 620 (Fed. Cir. 2015); and (2) *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335 (Fed. Cir. 2015). Dkt. No. 50

at 29-30. The Court finds that the facts in those cases are inapposite to the facts in the present case.

Unlike the claimed invention of the '625 Patent, the claim language in *Teva* and *Dow* both required measurement of a specific value to determine if the value fell within a range. In *Dow*, the asserted claims required a "slope of strain hardening coefficient greater or equal to 1.3." *Dow*, 803 F.3d at 622, 624–27. In *Teva*, the claims required that a copolymer have a specific molecular weight "of about 5 to 9 kilodaltons," which could be calculated using one of three known measurement methods. *Teva*, 789 F.3d at 1338.

Claim 15 of the '625 Patent does not require the measurement of a specific value for the compressive force. The claim only requires that the compressive force be greater in one location than another. The specification teaches how to compare the compressive forces, and one of ordinary skill in the art would understand that there are alternative ways to compare the compressive forces being applied to the end fitting. Contrary to Defendant's assertion, a claim is not automatically indefinite because it is drafted broadly and could cover a variety of methods. *Cywee Grp., Ltd. v. Huawei Device Co., Ltd.*, No. 2:17-cv-00495 WCB-RSP, 2018 U.S. Dist. LEXIS 206369, at *43 (E.D. Tex. Dec. 6, 2018) ("Merely because a claim is drafted broadly and could cover a variety of methods does not automatically render a claim indefinite.").

Here, the claim requires comparison of the compressive forces to determine where the greater force is being applied. This is distinguishable from *Dow* where the claim term in question was "a slope of strain hardening coefficient greater than or equal to 1.3." *Dow*, 803 F.3d at 631. Because the claim only covered a specific slope, the existence of different methods to determine the slope producing different results made it impossible to determine the scope of the claim. *Id.* at 631-35. This not the case here. The compressive force distributed to the sucker rod through the end fitting can be determined at different locations. This also is not the case where a specific value

was claimed and there were three possible values to select from as was the case in *Teva*.

In denying Dow's petition for panel rehearing and rehearing *en banc*, the Federal Circuit recognized that "if a skilled person would choose an established method of measurement, that may be sufficient to defeat a claim of indefiniteness, even if that method is not set forth in *haec verba* in the patent itself." *Dow Chem Co. v. Nova Chem Corp.*, 809 F.3d 1223, 1224 (Fed. Cir. 2015); *see also*, *Cywee*, 2018 U.S. Dist. LEXIS 206369, at *43 ("That 'to compare' is not limited to a specific method to compare does not render the term indefinite). This is further supported by *Ethicon*, which found that "[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique." *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015). Thus, the Court finds that the claims, viewed in light of the specification, inform those skilled in the art about the scope of the invention with reasonable certainty. Accordingly, Defendant has failed to prove by clear and convincing evidence that the term is indefinite.

3. Court's Construction

For the reasons set forth above, the Court construes the phrase **"the compressive force of the end fitting under load"** to mean **"the compressive force distributed to the sucker rod through the end fitting."**

IV. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered to not refer to each other's claim construction positions in the presence of the jury. Likewise, in the presence of the jury, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court.

The Court's reasoning in this order binds the testimony of any witnesses, and any reference to the claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 28th day of May, 2021.

ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE